Agriculture: Economic Growth, Poverty Reduction, and Food Security

December 11, 2002

Some Questions about Agriculture….

- **What's new?**
- **What are the challenges?**
- **What will it take to meet them?**
- **What can USAID do?**
- **How can we succeed?**

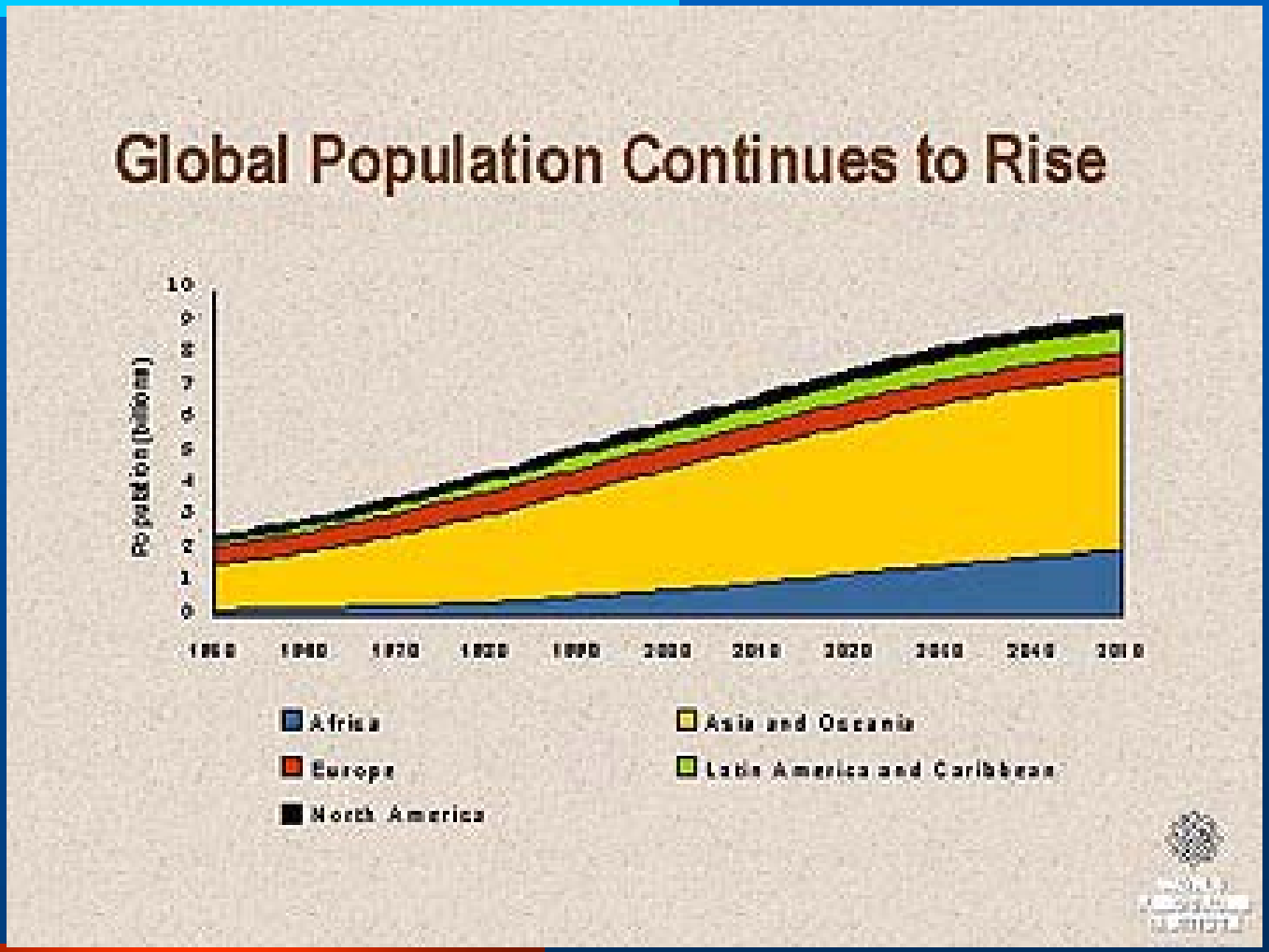
What's New? First, What's Not New?

- People need to eat every day...
- and get most of their nutrients through staple foods
- Rural people in developing countries grow or harvest a large part of their daily diet
- …and depend on their production for some income.

What's new?

- **2 billion more kids**

Where will the new kids live?

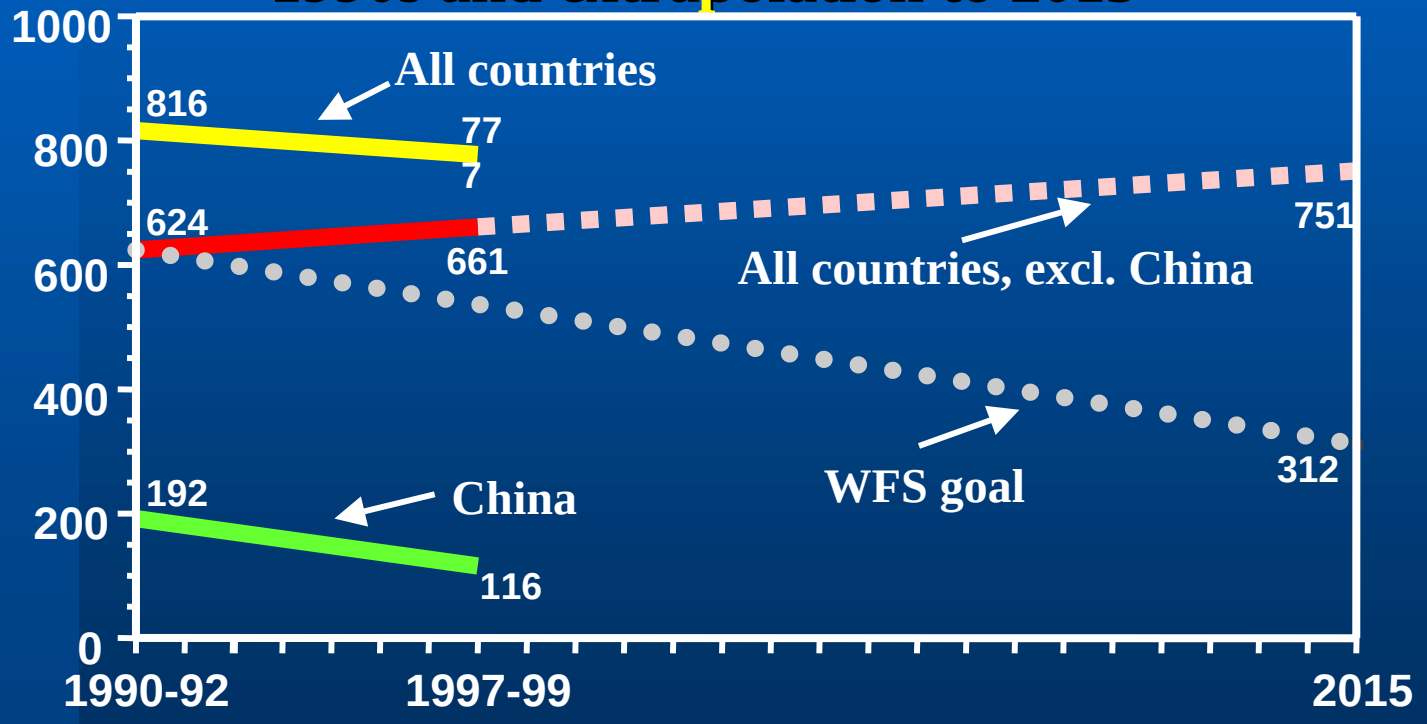


What's new?

- 2 billion more kids
- **World hunger is growing**

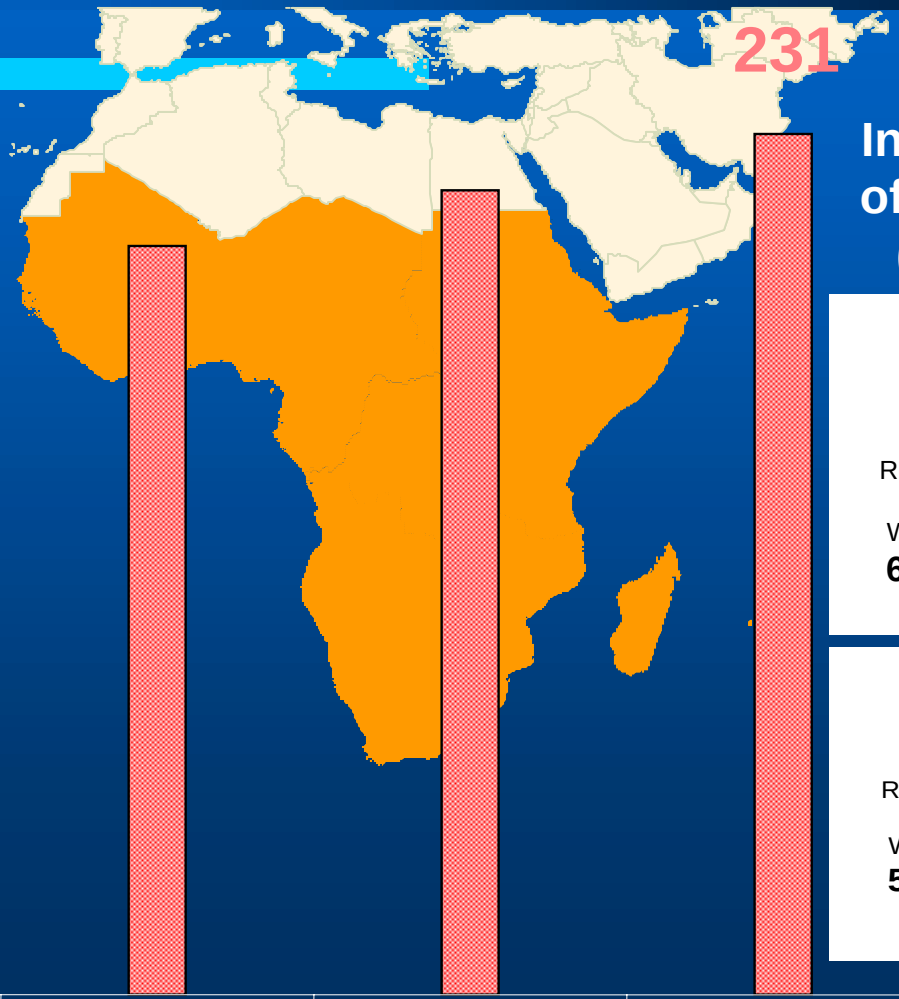
World Hunger is Growing!

Change in the number of food-insecure people during the 1990s and extrapolation to 2015

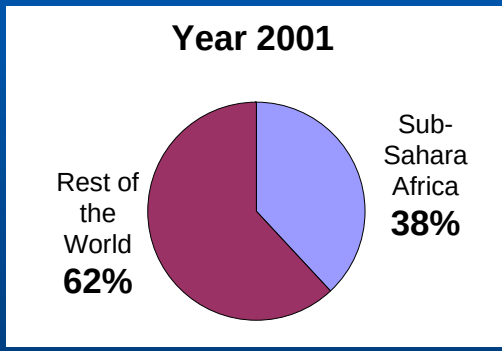


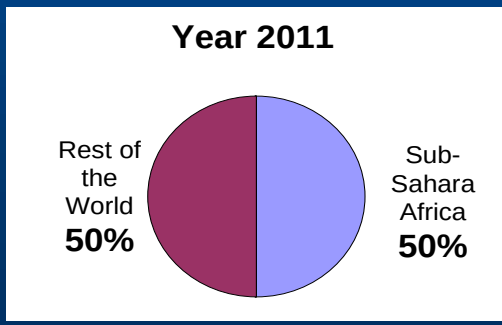
Source: Based on data from FAO, *The State of Food Insecurity in the World 2001* (Rome: FAO, 2001).

Hunger in Africa is Expected to Rise



Increasing Share of Global Hunger (USDA, 2002):

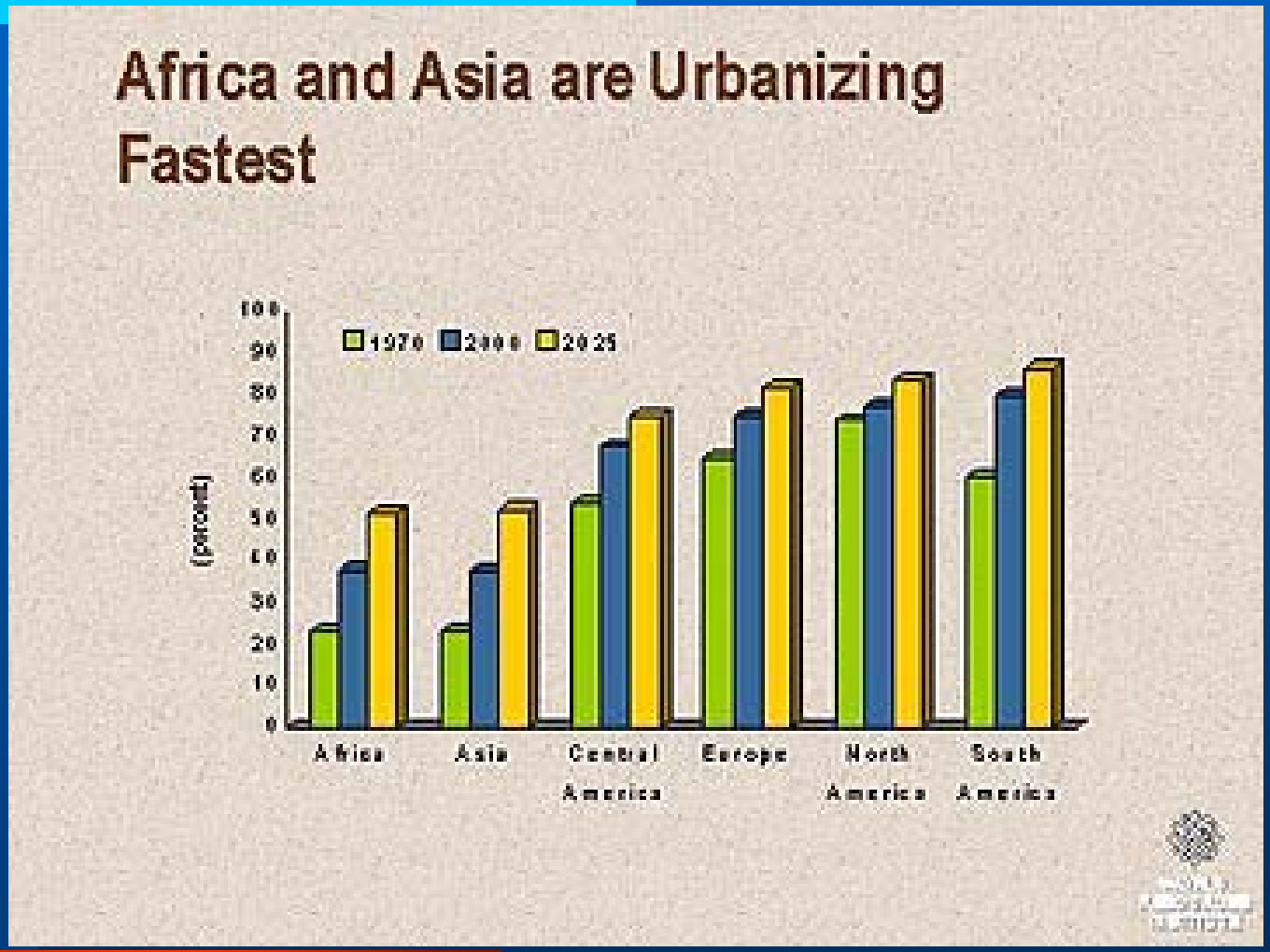




What's new?

- 2 billion more kids
- World hunger is growing
- **Urbanization**

Urban Growth



What's new?

- 2 billion more kids
- World hunger
- Urbanization
- Market opportunities

Market Growth

Staples	1997		2020	Change
– Total mmt	1843	→	2497	+ 654
– Rice	33%	→	29%	- 4%
– Wheat	30%	→	29%	- 1%
– Corn	26%	→	30%	+ 4%
Feedgrain (mmt)				
– Developed	425	→	492.6	+ 16%
– Developing	235	→	432	+ 84%
Meat (mmt)				
– Developed	97.7	→	114.3	+ 17%
– Developing	110.5	→	212.3	+ 92%

What's new?

- 2 billion more kids
- World hunger
- Urbanization
- Market opportunities
- **Multipliers**

Multipliers: Understanding Ag as a Driver of Rural Growth

- **The Muda River studies in the 1970s**
- **The reanalysis of the African multipliers in the late 1990s**
- **The econometric examination of economic growth**
- **The LAC exception**

Agriculture Multipliers in Africa

- Over 80% of the population derive their livelihoods from agriculture – such that a stagnant agriculture means economic stagnation
- Agriculture accounts for 30% of total GDP, 40% of export earnings, and 70% of the labor force
- A 1% increase in agricultural productivity has been shown to reduce poverty by 6 million people
- There is a broad consensus within the international community that agriculture is key if hunger and poverty are to be halved by 2015

What's new?

- 2 billion more kids
- World hunger is growing
- Urbanization
- Market opportunities
- Multipliers
- Changing environment

Changing Environment?

- More GHG
- Water shortages
- Soil degradation
- Forest loss
- Weather events
- Brown pollution
- Global transmission

Critical Issues Affecting Environment & Agriculture

- **Increasing competition and conflict over Natural Resources**
- **Declining production and increasing poverty due to land degradation**
- **Poorly functioning or non-existent markets**
- **Contamination of soil and water from pesticide and waste**
- **Increased demand and evolving consumer desire for more diverse food products**

What's new?

- 2 billion more kids
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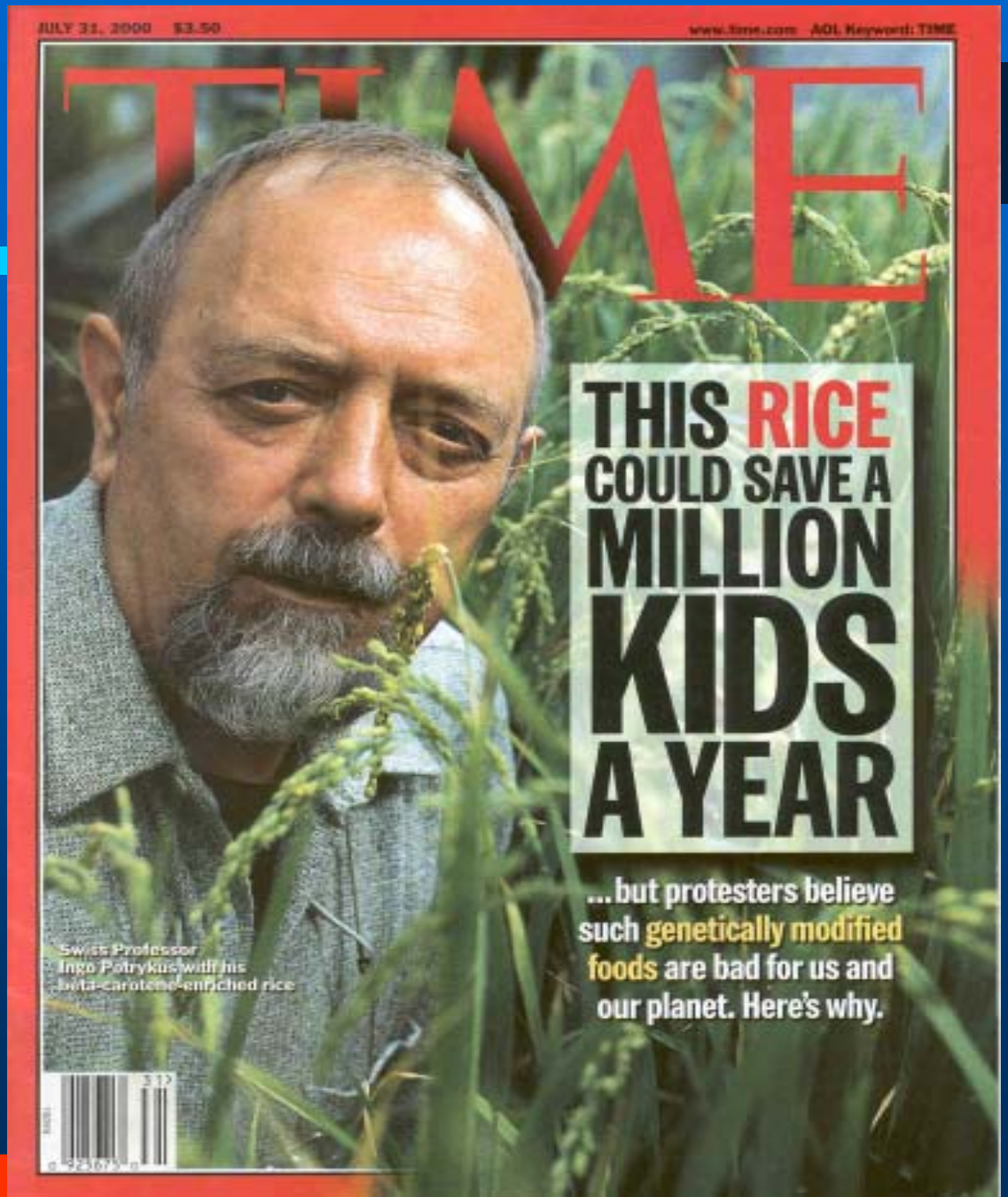
- Changing environment
- New science - biotech

Biotech -- the science of genes

- Beyond conventional research techniques
- Genetic transformation
- Creation of intellectual property
- Potential for good
- “Science-based” regulation
- Strong US political support


Traditional Papaya
Disease-resistant
Biotech Papaya


Insect-resistant
Biotech Cotton
Traditional Cotton


JULY 31, 2000 $3.50
www.time.com AOL Keyword: TIME
TIME
THIS RICE COULD SAVE A MILLION KIDS A YEAR
...but protesters believe such genetically modified foods are bad for us and our planet. Here's why.
Swiss Professor Ingo Potrykus with his beta-carotene-enriched rice

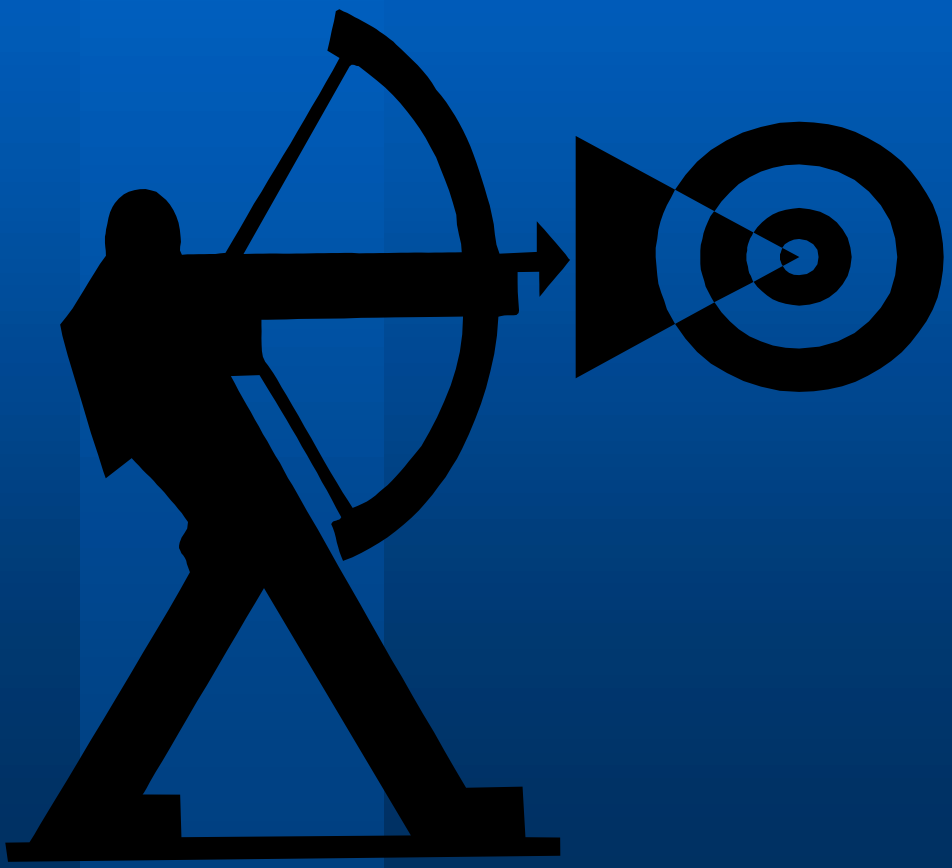
What Are The Challenges?

- **Breaking the production frontiers**
  - **The “architecture” of rice**
- **Targeting applications of technology**
  - **The use of GIS**
- **Revolutionizing communications**
  - **Getting information to people who need it**
- **Mitigating risks and protecting assets**
  - **Insurance and other financial “products”**

What Are The Challenges? (cont)

- **Sustainable investments in public goods**
  - **Linking private interests to public outcomes**
- **Mitigating and adapting to climate change**
  - **Short season corn and drought tolerant rice**
- **Building new markets**
  - **Kiwis and branded cacao?**
- **HIV/AIDS**

What Will It Take to Meet Them?



- Turning science into technology
- Scaling up technologies
- Pricing of environmental services in a market environment
- The people factor
- Policy, ideology, and policy coherence
- Titles, insurance and other tools
- Competitiveness

How Can We Succeed?

- **Define the long-term vision**
- **Respond to the opportunities**
- **Draw on the US comparative advantages**
- **Play to US interests**
- **Influence the multilateral dialogue**
- **Build our own capacity**
- **Effectively communicate & build support**

What Can USAID Do?

- **Ideas: Training, TA, and policy dialogue**
- **Funding: Investments, risk capital**
- **Partnering**
- **Collaborating**

HOW:

Science & Technology ⟷ Linking Farmers to Markets ⟷ Environmentally Sound Management

- **Technology Development and outreach**
  - **Cereals, livestock and fisheries**
  - **High value products**
  - **NRM Technologies**
  - **Water Efficiency**
- **Agribusiness Development**
  - **Market/Demand Driven (Supermarkets)**
  - **Clusters**
  - **Standards/quality**
  - **Cost competitive**
  - **Value chain**
- **Landscape approach**
- **Capacity to meet standards**
- **Trans-boundary/ regional issues**
- **Tools for integration**
- **Value chain**

⟵ **KNOWLEDGE** ⟶

The Pivotal Role of Agriculture

Safe & Affordable Food

Economic Growth

Environment


TRESOR